IN THE CLAIMS

Please amend the claims as follows. Added text is underlined and deleted text is either struck through or shown in double enclosing brackets. Applicants aver that no new matter has been added.

1. (Currently Amended) A magnetic signature minesweeping device comprising:

[[-]] ~~a water driven turbine power generator and~~

[[-]] a superconducting material ~~magnet,~~ magnet;

a power supply connection ~~wherein the turbine power generator is arranged, in use,~~ to supply a driving current for the superconducting material ~~magnet when the minesweeping device is towed through the water.~~ magnet;

a control unit arranged to control a magnetic output of the superconducting magnet; and

a heading sensor in communication with the control unit to monitor a magnetic heading of the device, the control unit being further arranged to control the magnetic output of the superconducting material magnet responsive to the magnetic heading, and to cause different magnetic outputs to be provided for different magnetic headings.

2. (Canceled).

3. (Currently Amended) A device as claimed in claim 1 wherein the minesweeping device comprises a water driven turbine power generator to supply the driving current through said power supply connection and a plurality of sensor units arranged~~, in use,~~ to monitor the magnetic output of the superconducting magnet[[,]] and the power output of the turbine power generator, and further comprises a feedback arrangement to supply feedback signals from the sensor units to the control unit, wherein the magnetic output and power output can be optimised for a specific mine countermeasure task.

4. (Currently Amended) A device as claimed in claim [[1]] 3, wherein the turbine power generator comprises adjustable pitch blades, whereby drag characteristics of the turbine power generator are adjustable.

5. (Currently Amended) A device as claimed in claim 1, wherein the superconducting material magnet is disposed as a ~~single axis longitudinal magnetic source or as a~~ three-axis magnetic source.

6. (Currently Amended) A device as claimed in claim 1, wherein the minesweeping device further comprises a communications unit arranged~~, in use,~~ to enable remote access to the control unit.

7. (Previously Presented) A device as claimed in claim 6, wherein the communications unit is selected from a group comprising acoustic, radio, induction and cable format communication devices.

8. (Previously Presented) A device as claimed in claim 1, wherein the superconducting material magnet comprises a high T_C superconductor.

9. (Original) A device as claimed in claim 8, wherein the superconducting material magnet is operable at liquid nitrogen temperatures.

10. (Previously Presented) A device as claimed in claim 8 wherein the superconducting material magnet is selected form a group of materials including multi-filamentary composite wire BSCCO-2223 ($Bi_2Sr_2Ca_2Cu_3O_{10+\delta}$) and a coated conductive composite incorporating YBCO($YBa_2Cu_3O_{7-\delta}$).

11. (Currently Amended) A device as claimed in claim 1, wherein the superconducting material magnet is arranged such that~~, in use,~~ it exhibits a permanent magnetic output component and a variable magnetic output component ~~for representing~~ to represent [[the]] permanent and induced components of a vessel's magnetic signature.

12. (Currently Amended) A device as claimed in claim [[2]] 1, wherein the control unit is arranged~~, in use,~~ such that the magnetic output is variable as a function of time and/or position, ~~for facilitating~~ to facilitate the generation of desired magnetic signatures ~~for simulating~~ to emulate vessels, the device including at least one position sensor to which the control unit is responsive.

13. (Previously Presented) A device as claimed in claim 1, wherein the device is a magnetic signature device operable in target emulation mode (TEM), wherein it emulates the magnetic signature of a particular vessel.

14. (Currently Amended) A device as claimed in claim 1 wherein the device is operable in mine setting mode (MSM), and is ~~programmed~~ configured to produce a magnetic signature associated with a particular type of mine ~~for triggering~~ to trigger said mine.

15. (Currently Amended) A ~~device~~ plurality of magnetic signature minesweeping devices as claimed in claim [[2]] 1, arranged in an array, wherein the devices each comprise ~~wherein the minesweeping device comprises~~ an interface unit ~~for interfacing~~ to interface at least one device to at least one adjacent device in the array, ~~to at least one other minesweeping device,~~ wherein at least one of the plurality of devices receives current input and the interface unit comprises an electrical output for power "take-off" ~~from the turbine power generator~~ to ~~the at least one other~~ the at least one adjacent minesweeping device in the array.

16. (Currently Amended) A plurality of magnetic signature minesweeping ~~device~~ devices as claimed in claim 15, wherein the interface unit is arranged such that~~, in use,~~ the power take-off is facilitated via a tow and power cable connection ~~to the at least one other~~ between each of the plurality of minesweeping ~~device.~~ devices.

17. (Canceled).

18. (Currently Amended) A ~~device~~ plurality of devices as claimed in claim 15, wherein the interface unit further comprises a control interface, whereby the control unit of the one of the plurality of minesweeping ~~device~~ devices is capable of controlling the magnetic output of ~~the other~~ another one of the plurality of minesweeping devices.

19. (Currently Amended) A device as claimed in claim 1, including a power supply connected to the power supply connection, wherein the ~~turbine~~ power supply ~~generator~~ and the superconducting material magnet are implemented as separate elements arranged~~, in use,~~ to be connected via a tow and power cable.

20. (Currently Amended) A method of magnetic signature minesweeping comprising:

towing a minesweeping device through water;

~~utilising a water driven turbine power generator and a superconducting material magnet, wherein the turbine power generator supplies~~ supplying a driving current ~~for the~~ to a superconducting material magnet in the minesweeping device when the minesweeping device is towed through the ~~water.~~ water; and

monitoring the magnetic heading of the minesweeping device and controlling a magnetic output of the superconducting magnet to provide different magnetic outputs for different headings.

21. (Currently Amended) A method as claimed in claim 20, wherein the minesweeping device comprises a turbine power generator to provide a power output comprising said driving current for the superconducting magnet, and wherein the method comprises controlling ~~the magnetic output of the superconducting magnet, and~~ the power output of the turbine power generator to thereby control the magnetic output of the superconducting magnet.

22. (Currently Amended) A method as claimed in claim [[20]] 21, wherein the method further comprises monitoring both the magnetic output of the superconducting magnet and the power output of the turbine power generator, and supplying feedback signals for the controlling of the magnetic output and the power output, whereby the magnetic output and power output can be optimised for a specific mine countermeasure task.

23. (Currently Amended) A method as claimed in claim [[20]] 21, wherein the turbine power generator comprises adjustable pitch blades, whereby drag characteristics of the turbine power generator are adjustable.

24. (Currently Amended) A method as claimed in claim 20, wherein the superconducting material magnet is disposed as a ~~single axis longitudinal magnetic source or as a~~ three-axis magnetic source.

25. (Currently Amended) A method as claimed in claim 20 including arranging the superconducting material magnet such that~~, in use,~~ it exhibits a permanent magnetic output component and a variable magnetic output component ~~for representing~~ to represent [[the]] permanent and induced components of a vessel's magnetic signature.

26. (Currently Amended) A method as claimed in claim 20, wherein the method further comprises varying the magnetic output as a function of time and/or position, ~~for facilitating~~ to facilitate generating desired magnetic signatures for simulating vessels.

27. (Currently Amended) A method ~~as claimed in claim 20, wherein the method further comprises the step of~~ of magnetic signature minesweeping using a plurality of minesweeping devices that each include a superconducting material magnet, the method comprising:

supplying a driving current for the superconducting material magnets;

monitoring an overall magnetic heading of the plurality of minesweeping devices;

controlling a magnetic output of the superconducting magnets to automatically provide different magnetic outputs for different headings; and

interfacing ~~to one or more other~~ the minesweeping devices, wherein the interfacing comprises an electrical output for power "take-off" from ~~the turbine power generator~~ a first of the plurality of minesweeping ~~device~~ devices to ~~at least one other~~ another ~~said~~ of the plurality of minesweeping ~~device~~ devices so as to provide the driving current for the superconducting material magnet of the other minesweeping device.

28.-29. (Canceled).

30. (Currently Amended) A magnetic signature minesweeping arrangement comprising:

an array of minesweeping devices configured to be towed in a serial array, each of the minesweeping devices including a superconducting material ~~magnet, and~~ magnet;

at least one of the minesweeping devices including a water driven turbine power generator arranged~~, in use,~~ to power ~~at least one of~~ a plurality of the minesweeping ~~devices.~~ devices; and

a controller to control an overall direction of a magnetic output from the superconducting material magnet of each minesweeping device in response to a determination of a magnetic heading of the magnetic signature minesweeping arrangement.

31. - 33. (Cancelled)

34. (New) A device as claimed in claim 1, comprising a water driven turbine power generator that supplies the driving current when the minesweeping device is towed through water.

35. (New) A method as claimed in claim 24, further comprising a power supply, the power supply being a water driven turbine power generator to supply the driving current when the minesweeping device is towed through water.

36. (New) A method as claimed in claim 27, further comprising a power supply, the power supply being a water driven turbine power generator to supply the driving current when the minesweeping device is towed through water.

37. (New) A device as claimed in claim 11, wherein the permanent magnetic output component comprises a non-zero permanent vertical magnetisation.

38. (New) A device as claimed in claim 37, wherein the control unit controls the permanent vertical magnetisation responsive to the magnetic heading, causing different permanent vertical magnetisations to be provided for different magnetic headings.

39. (New) A device as claimed in claim 11, wherein the permanent magnetic output component comprises non-zero permanent longitudinal and across-ship magnetisations.

40. (New) A device as claimed in claim 39, wherein the control unit controls the permanent vertical magnetisation and the permanent longitudinal magnetisation responsive to the magnetic heading, causing different permanent vertical magnetisations and different permanent longitudinal magnetisations to be provided for different magnetic headings.

41. (New) A device as claimed in claim 11, wherein the permanent magnetic output component comprises a non-zero permanent across-ship magnetisation and wherein the control unit controls the permanent across-ship magnetisation responsive to a latitude of the device, causing different permanent vertical magnetisations to be provided for different latitudes.